

## **ABSTRACT OF THE DISCLOSURE**

A system and method for measuring the speed of a fan is presented. The duty cycle of a pulse width modulated (PWM) power signal may control speed of the fan. The fan may generate tachometer pulses used for monitoring RPM of the fan. Very low frequency test pulses may be generated and provided via a test signal multiplexed with the PWM signal to obtain tachometer pulses present even when the PWM signal is deasserted. The frequency of the test signal may be determined based on the duty cycle of the PWM signal and may be dynamically updated using frequency divider values stored in a user programmable look-up table. The tachometer pulses may be used to reset a flip-flop whose data input is held high and a down counter, which may be operated at a frequency slightly lower than the frequency of the test signal, with the output of the down counter clocking the flip-flop. The output of the flip-flop may provide recreated tachometer pulses to a pulse counter that counts the number of pulses within a determined period of time, providing a measured RPM of the fan.

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